

Figure 1.

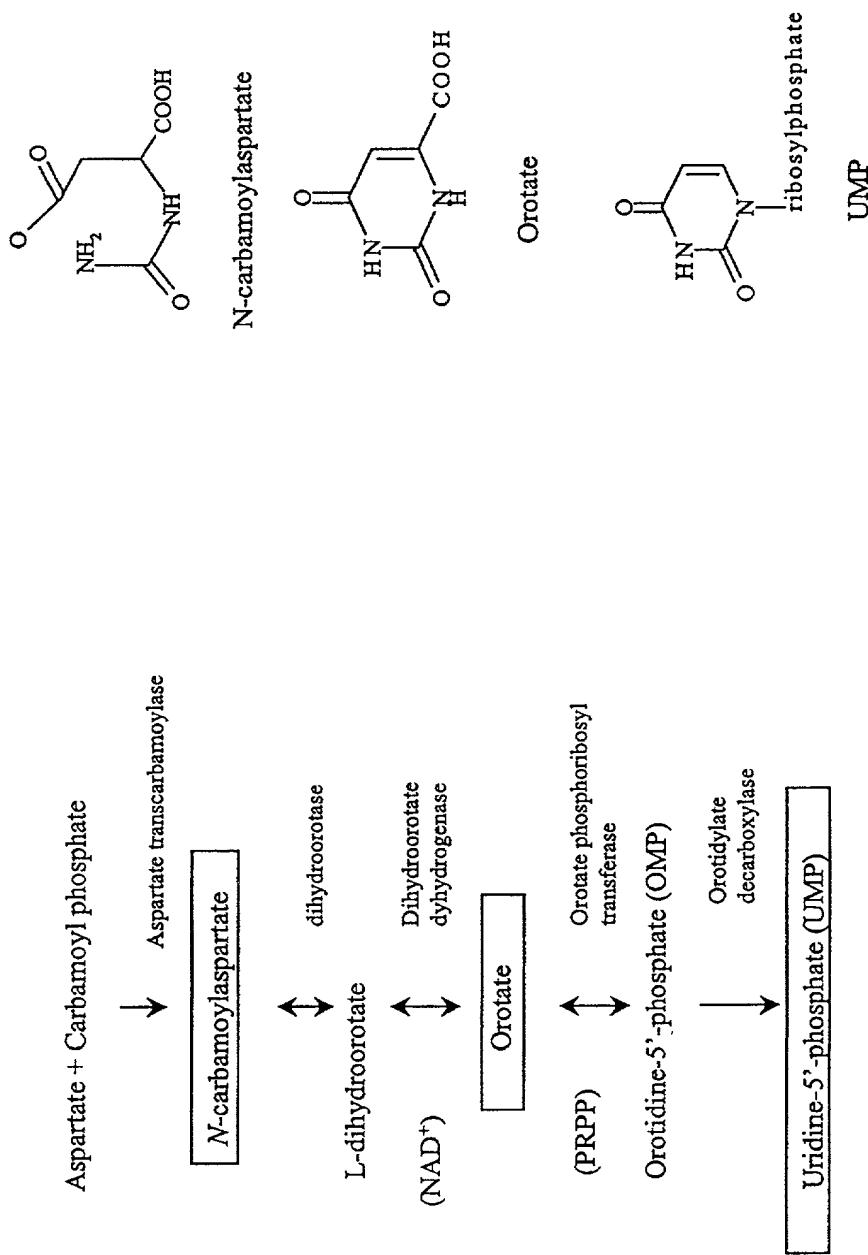


Figure 2.

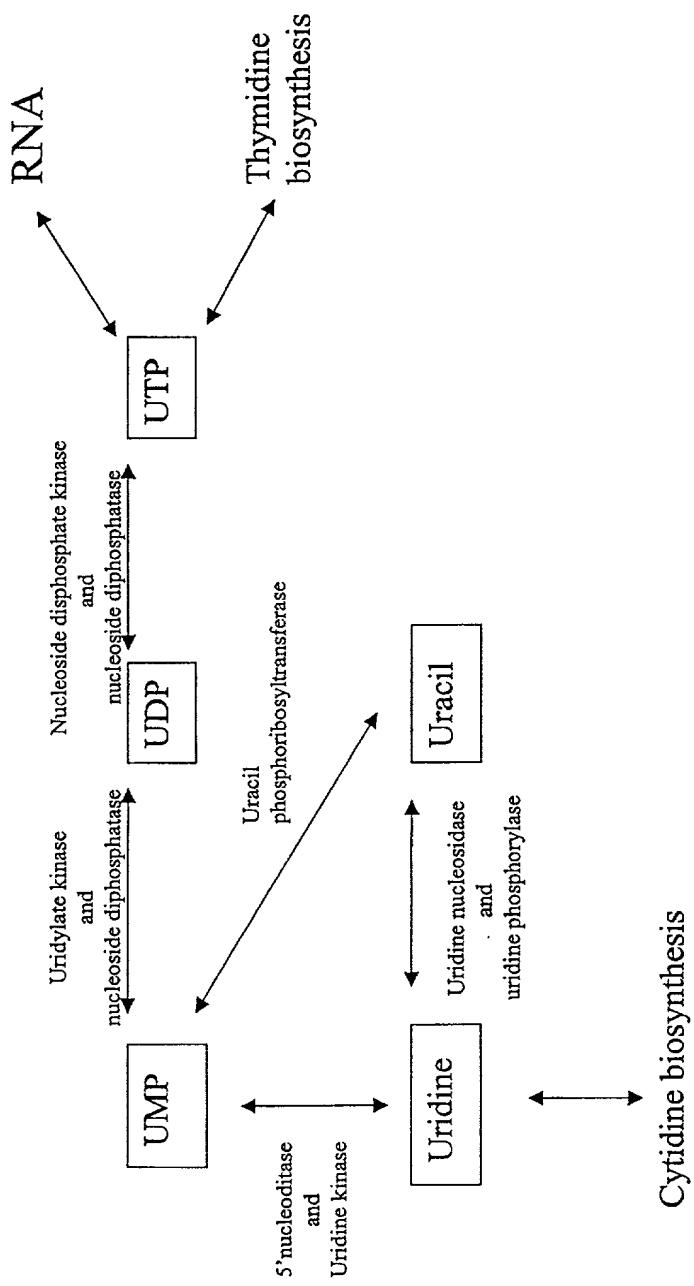


Figure 3

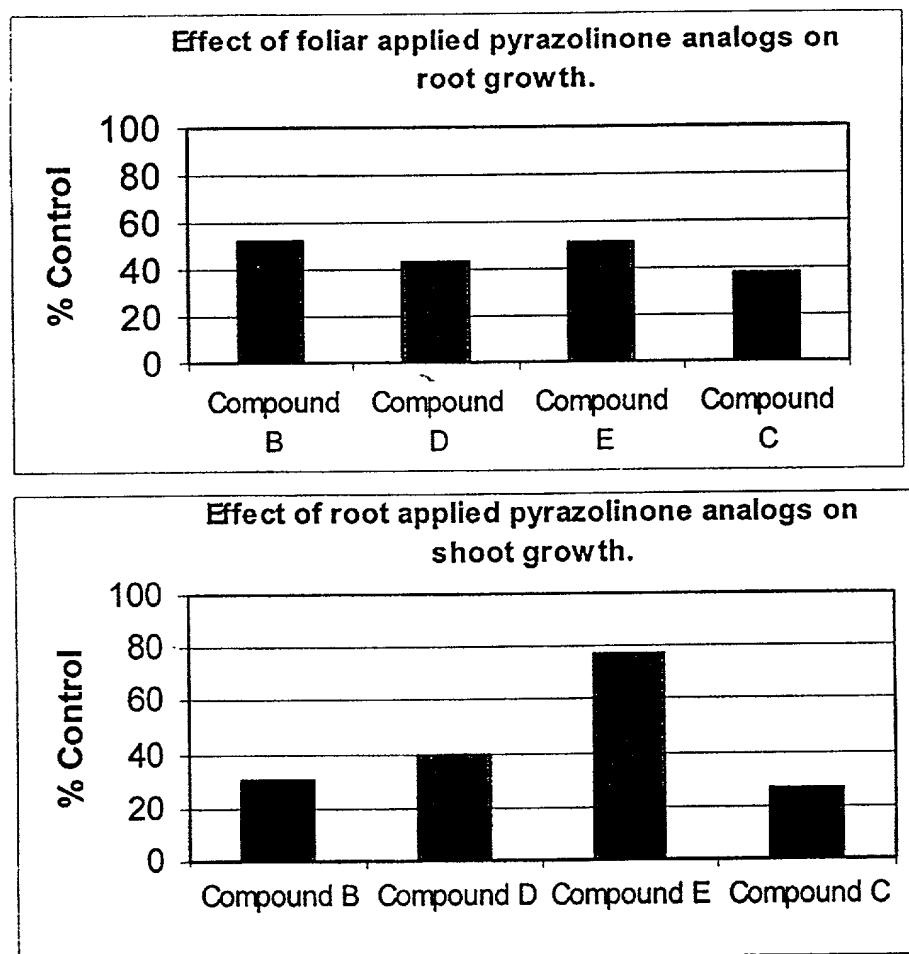


Figure 4.

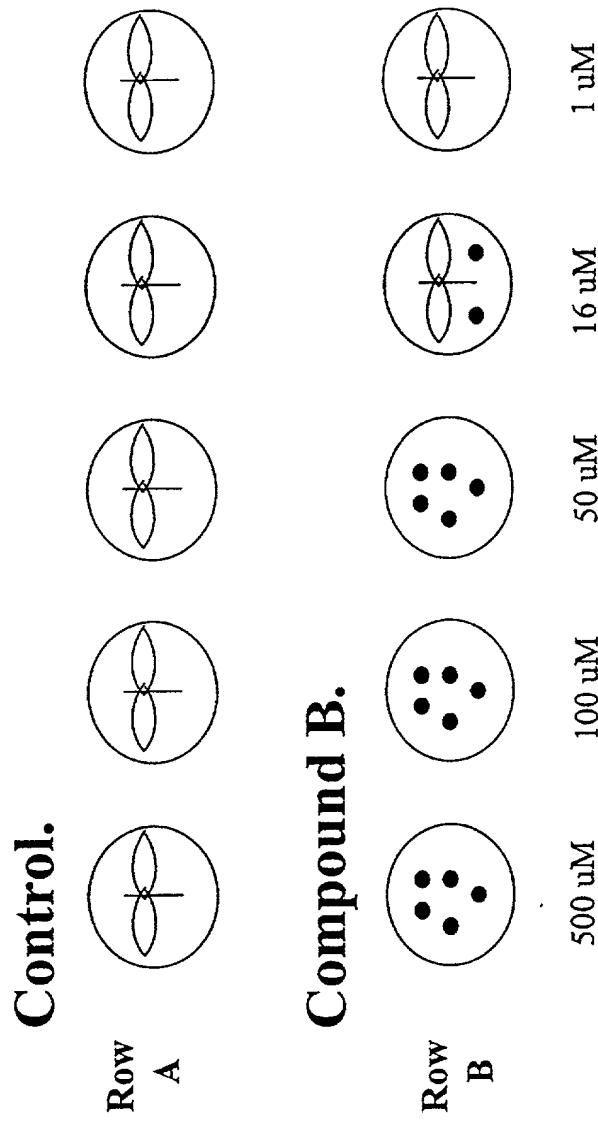


Figure 5.

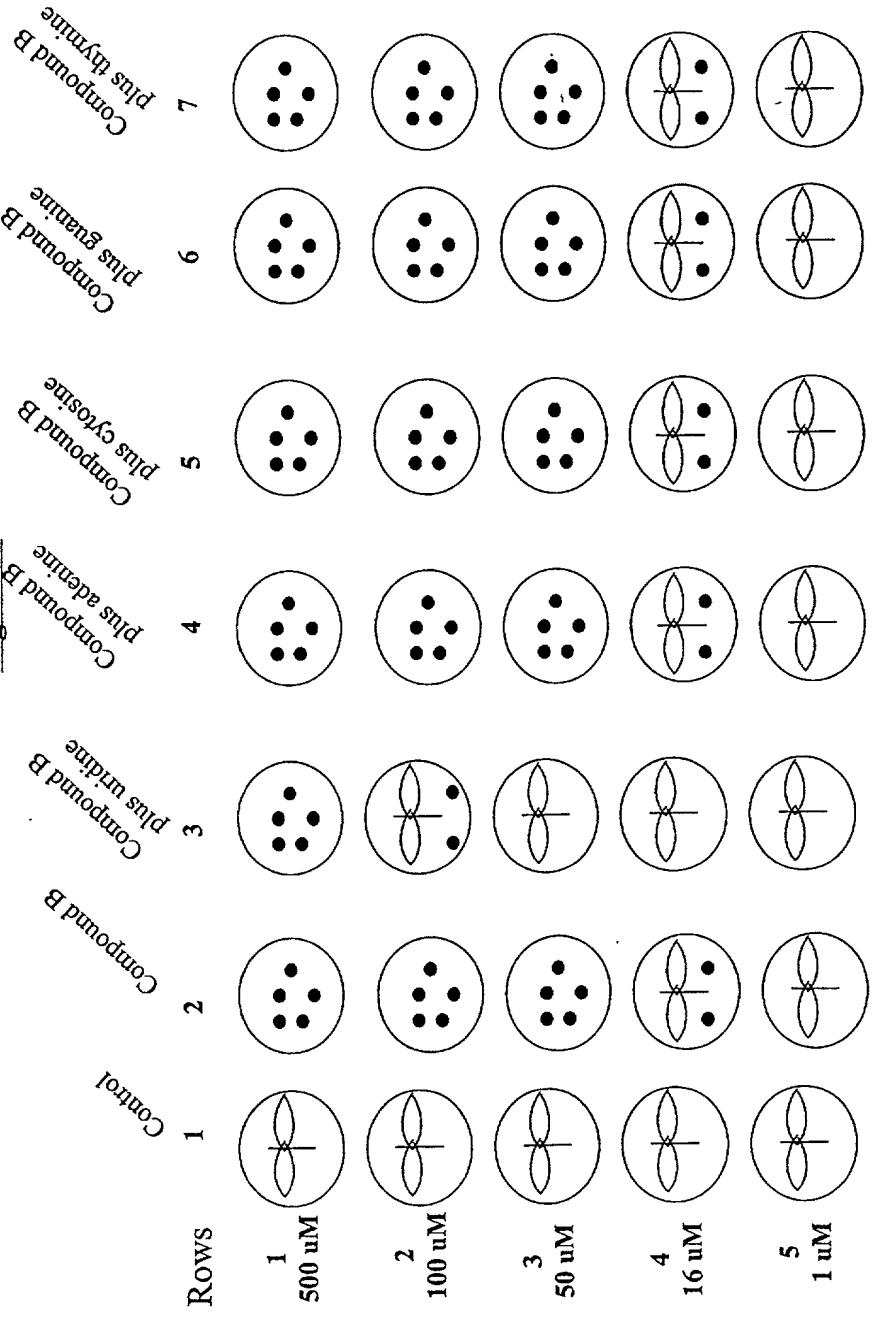


Figure 6.

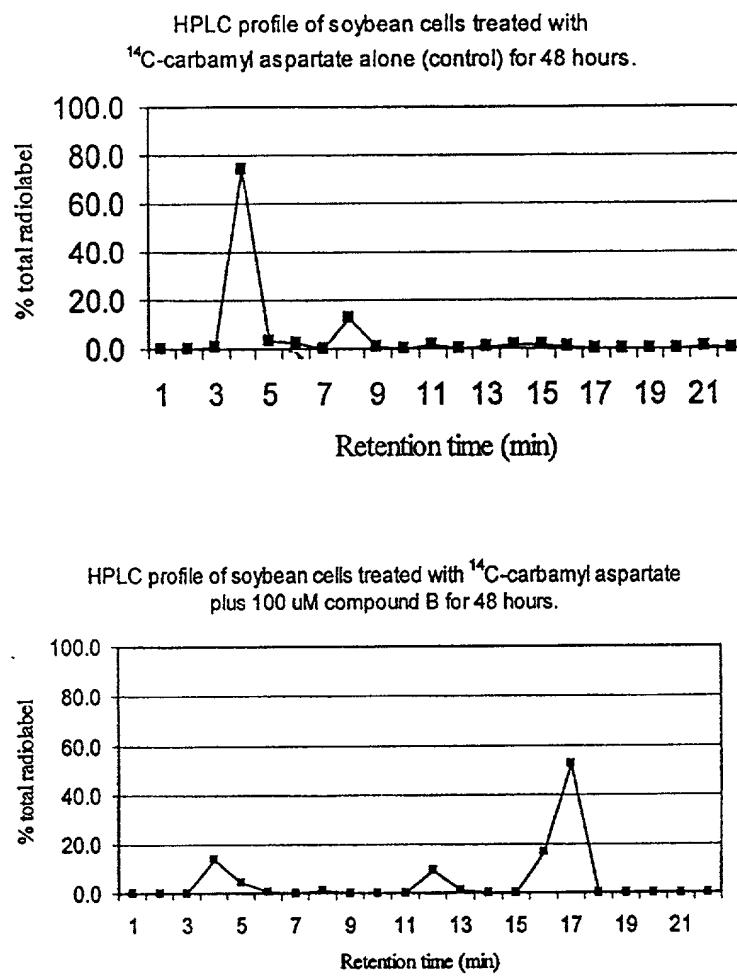


Figure 7.

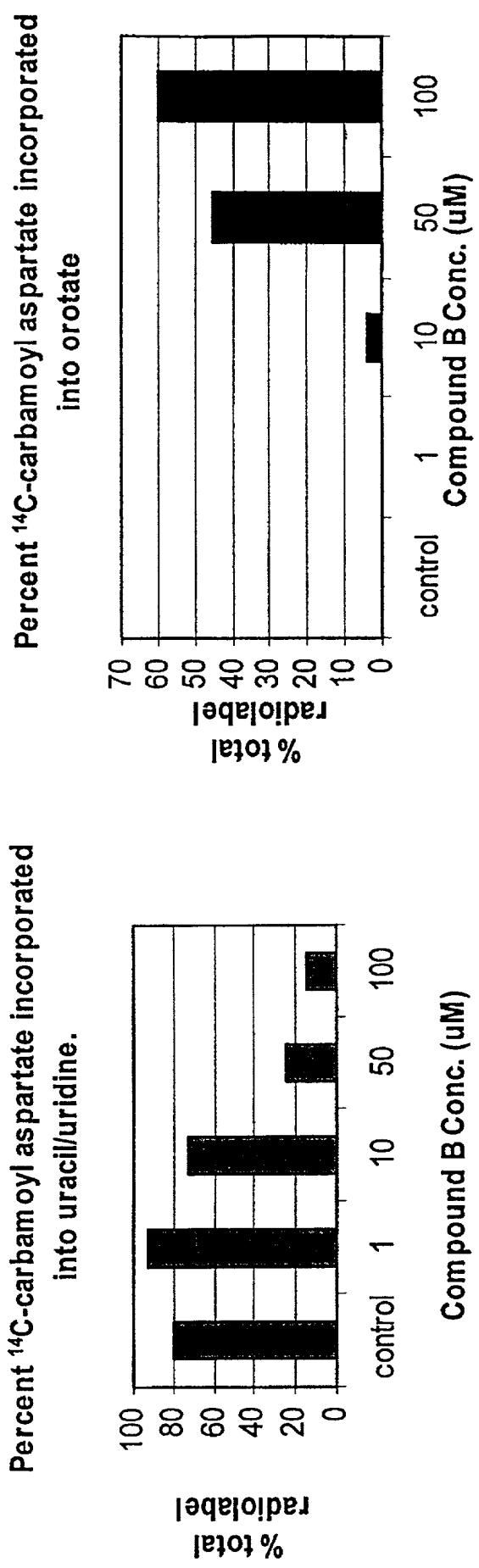


Figure 8.

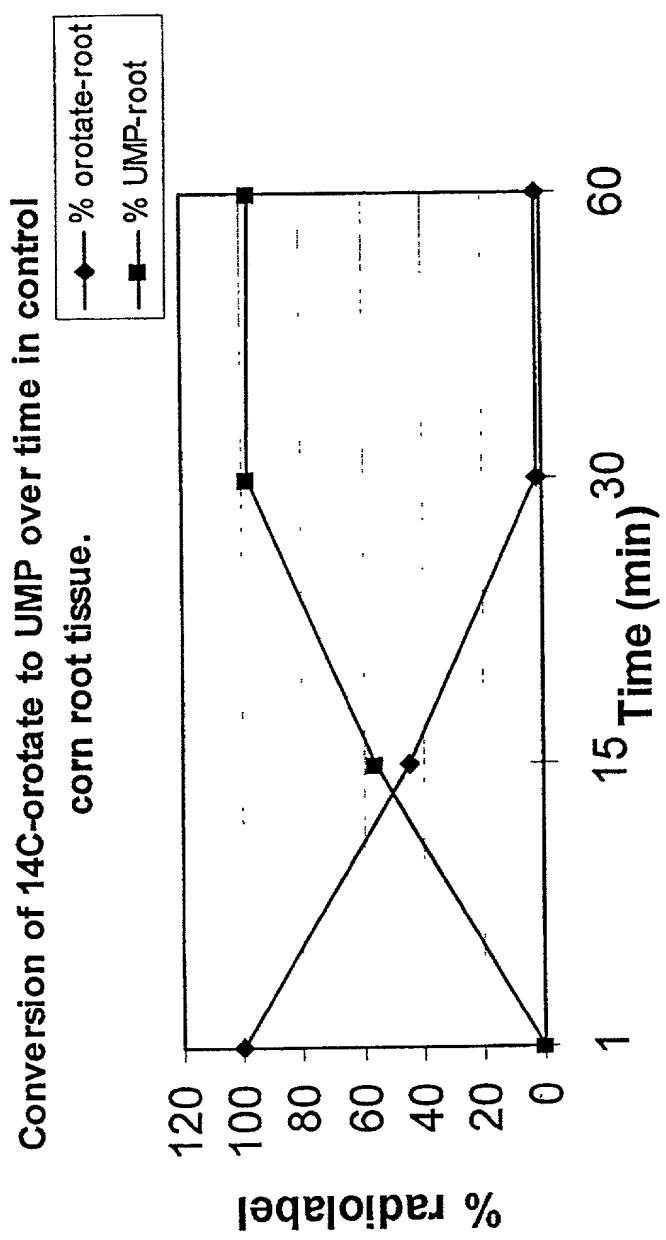


Figure 9.

Conversion of ¹⁴C-orotate to UMP 30 MAT in corn shoot tissue
with increasing concentrations of PRPP

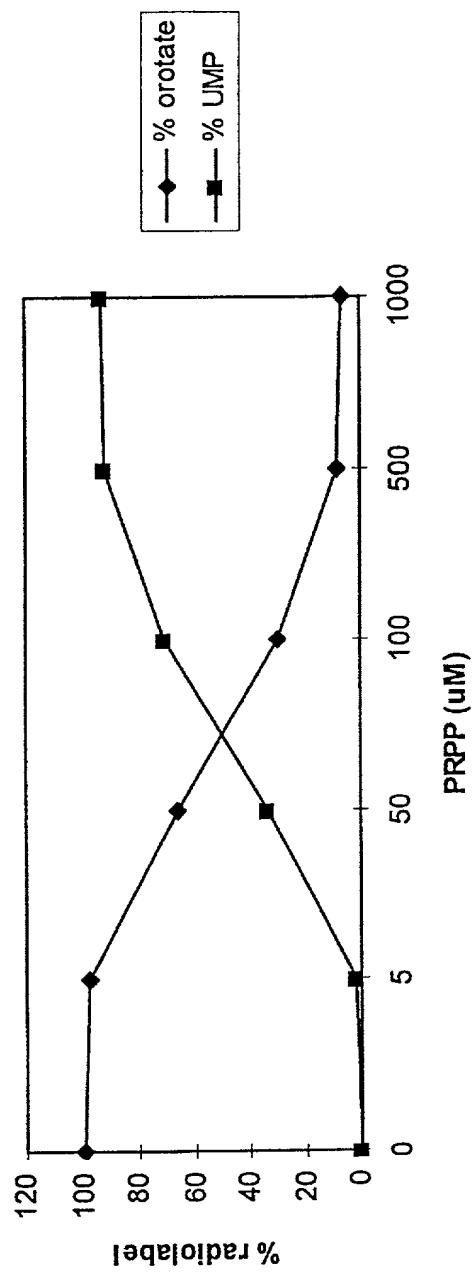


Figure 10.

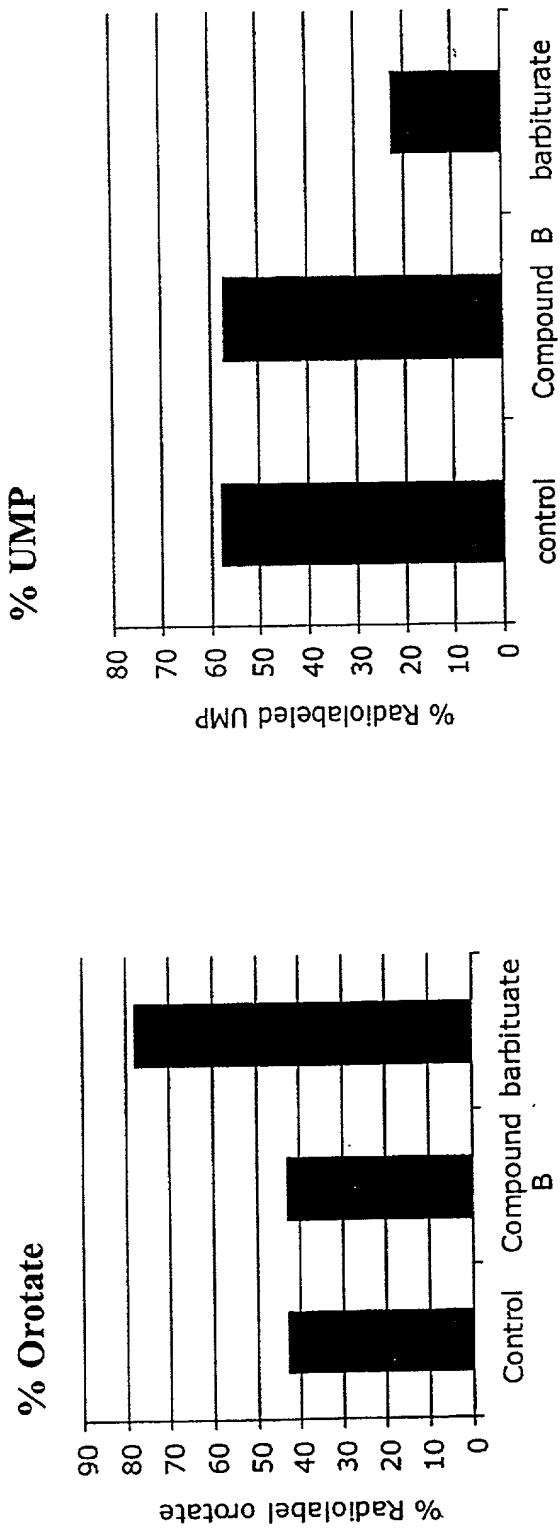
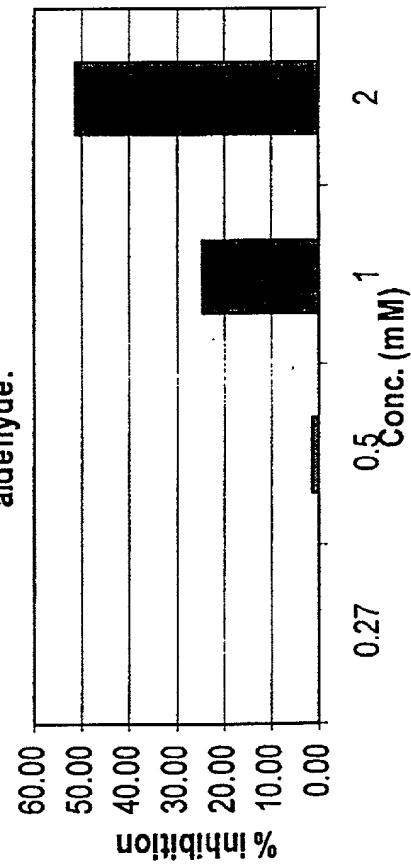


Figure 11.

Inhibition of the conversion of ^{14}C -orotate to UMP with increasing concentrations of pyrazole aldehyde.



Inhibition of the conversion of ^{14}C -orotate to UMP with increasing concentrations of barbiturate.

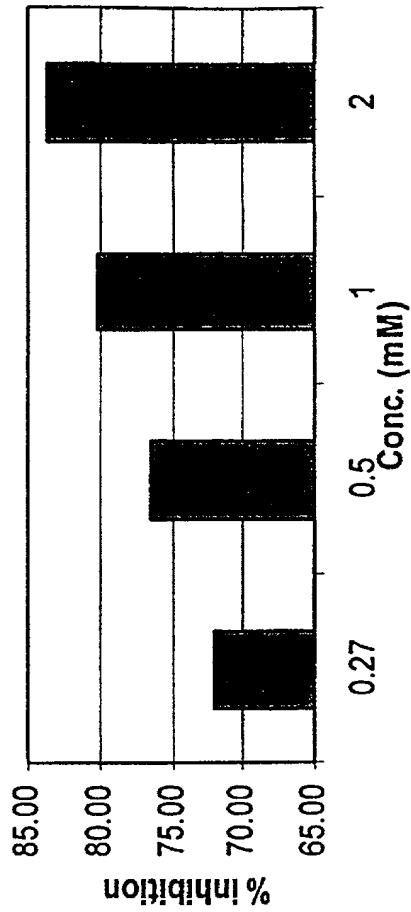


Figure 12.

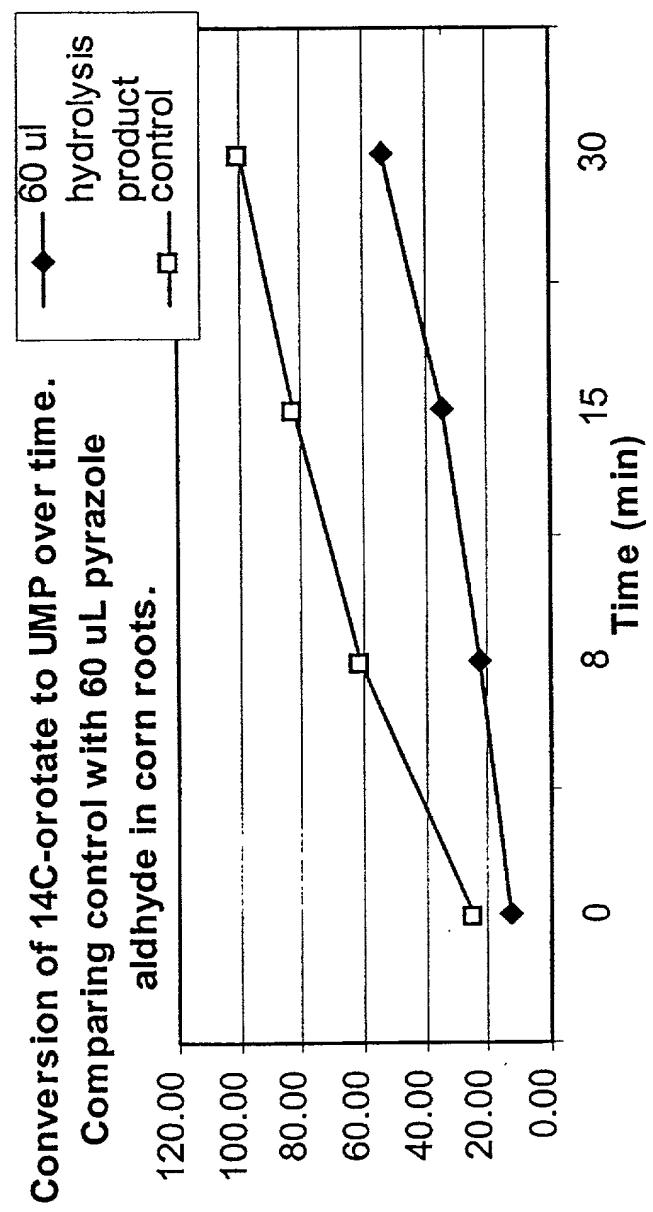
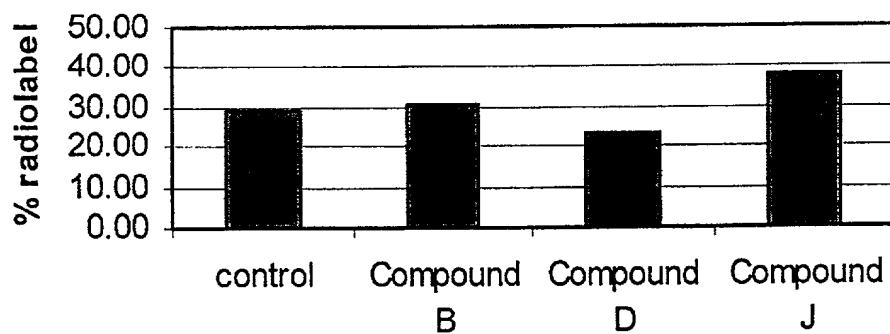


Figure 13.

Comparing amount of 14C-DHO conversion to orotate 30 MAT in fresh soybean microsomal prep.



Comparing amount of 14C-DHO converted to carbamoyl aspartate between treatments 30 MAT.

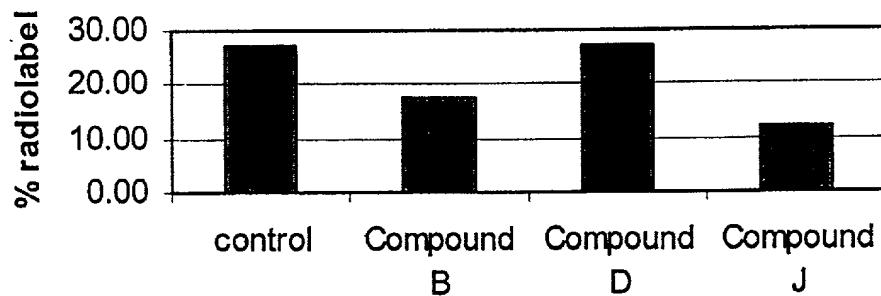


Figure 14.

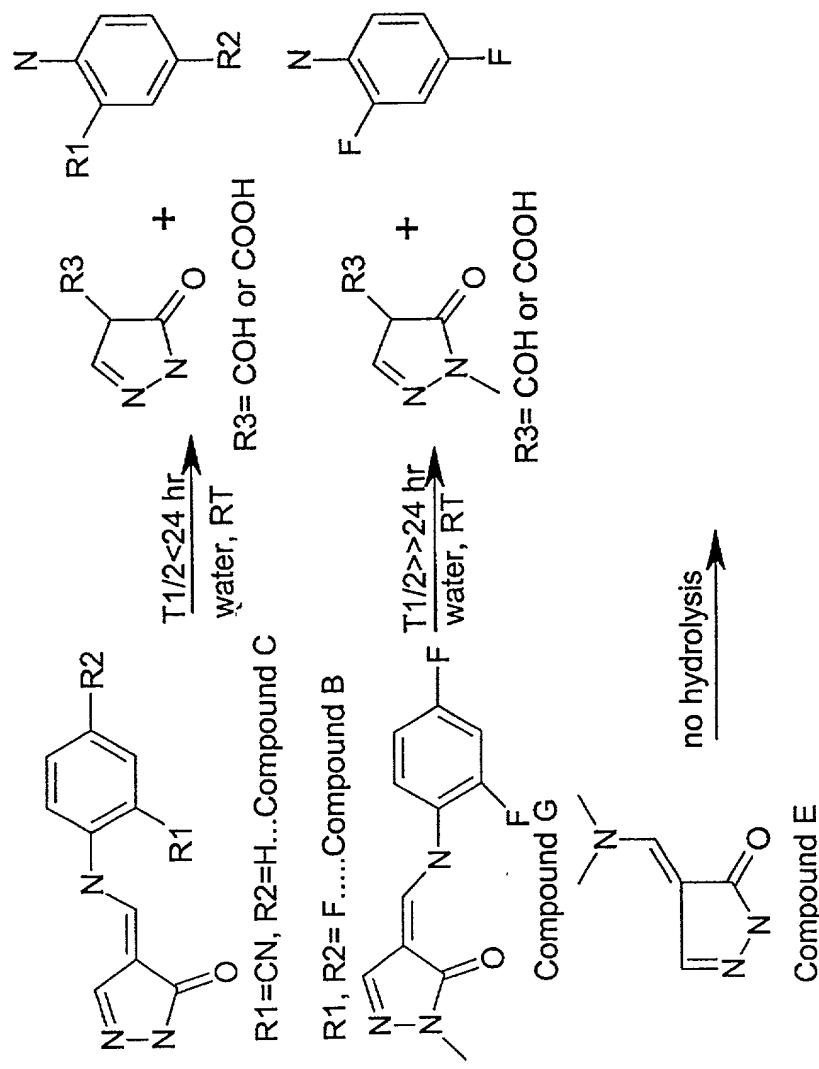


Figure 15.

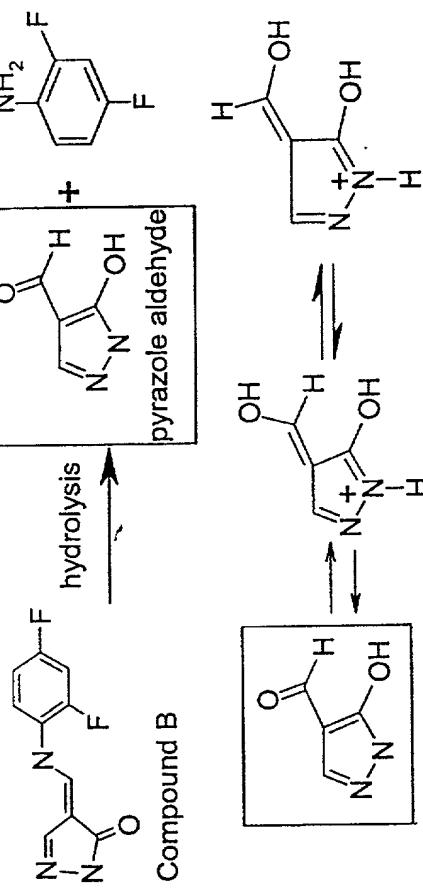


Figure 16.

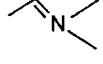
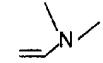
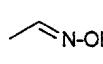
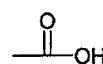
<u>R =</u>	<u>Compound</u>	<u>Active and Reversed</u>
	<input type="checkbox"/> F	<input type="checkbox"/> YES
	<input type="checkbox"/> E	<input type="checkbox"/> YES
	<input type="checkbox"/> D	<input type="checkbox"/> YES
	<input type="checkbox"/> J	<input type="checkbox"/> NO

Table 1

		Scientific Name	Common Name	Bayer Code
Broadleaf weeds	<i>Abutilon theophrasti</i>	velvetleaf		ABUTH
	<i>Ambrosia artemisiifolia</i>	common ragweed		AMBEL
	<i>Galium aparine</i>	catchweed bedstraw		GALAP
	<i>Sesbania exaltata</i>	hemp sesbania		SEBEX
	<i>Solanum nigrum</i>	black nightshade		SOLNI
Grass weeds				
	<i>Avena fatua</i>	wild oats		AVEFA
	<i>Bromus tectorum</i>	downy brome		BROTE
	<i>Digitaria sanguinalis</i>	large crabgrass		DIGSA
	<i>Echinochloa crus-galli</i>	barnyardgrass		ECHCG
	<i>Setaria viridis</i>	green foxtail		SETVI
	<i>Sorghum halapense</i> (seedling)	johnsongrass		SORHAS
Crops	<i>Glycine max</i>	soybean, Williams var.		GLXMAW
	<i>Oryza sativa</i>	rice, Tebonnet var.		ORYSAT
	<i>Triticum aestivum</i>	winter wheat, Riband var.		TRZAWR
	<i>Zea mays</i>	field corn		ZEAMX

Table 2.

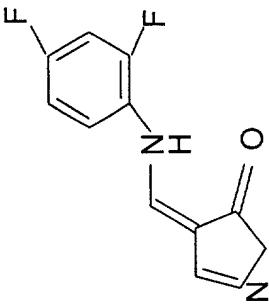
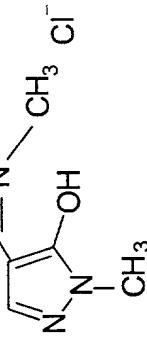
Concentration of the herbicide (μM)

Treatment	500	250	125	63	31	16	7.8	3.9
Compound B	8	7C	6C	5C	5C	5C	5C	5C
Compound B + 100 μM Uracil	5C	3C	3C	0	0	0	0	0
Compound B + 100 μM Uridine	6C	5C	3C	1	0	0	0	0
Compound B + 100 μM UMP	6C	5C	3C	1	0	0	0	0
Compound B + 100 μM AMP	8	7C	6C	5C	5C	5C	5C	5C
Compound B + 100 μM Adenine	8	7C	6C	5C	5C	5C	5C	5C
Compound B + 100 μM Cytosine	8	7C	6C	5C	5C	5C	5C	5C
Compound B + 100 μM Guanine	8	7C	6C	5C	5C	5C	5C	5C
Compound B + 100 μM Thymine	8	7C	6C	5C	5C	5C	5C	5C
Compound B + 100 μM Xanthine	8	7C	6C	5C	5C	5C	5C	5C

Table 3
Percent Inhibition

Compound	structure	% inhibition			
		GH SETVI injury (1 kg/ha post)	Miniscreen injury (re- versal)	Hydroponic in- jury (re- versal)	uracil re- versal
control		0	0	0	
barbiturate		NT	0	NT	
B		70	60 (0)	70	YES
C		60	80 (50)	75	PARTIAL

Compound	structure	% inhibition			
		GH SETVI injury (1 kg/ha post)	Miniscreen injury (re- versal)	Hydronic xylem in- jury.	uracil re- versal
D		50	40 (0)	60	YES
E		50	65 (0)	25	YES
F		50	55 (0)	65	YES

Compound	structure	% inhibition		
		GH SETVI injury (1 kg/ha post)	Miniscreen injury (re- versal)	Hydroponic xylem in- jury.
G	 <chem>CC1=NN2C(=O)C=C2N(F)c3ccccc31</chem>	0	0	20
H	 <chem>CC1=NN2C(O)C=C2N(C)CC1[Cl]</chem>	0	0	0

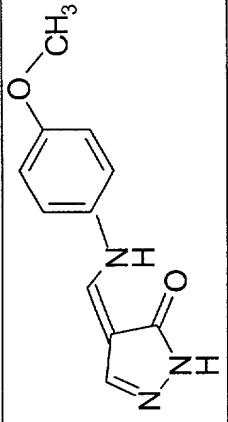
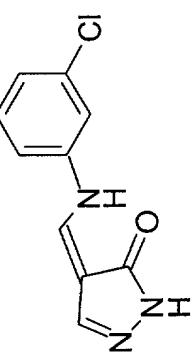
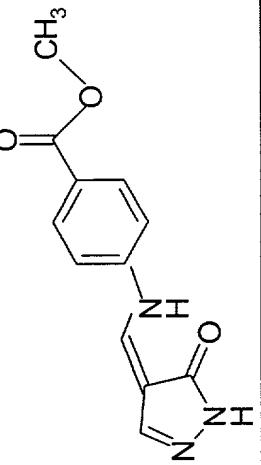
Compound	structure	% inhibition			
		GH SETVI injury (1 kg/ha post)	Miniscreen injury (re- versal)	Hydroponic xylem in- jury.	uracil re- versal
I		0	0	0	NO
J		0	0	0	NO

Notes: NA denotes that compound was not tested.

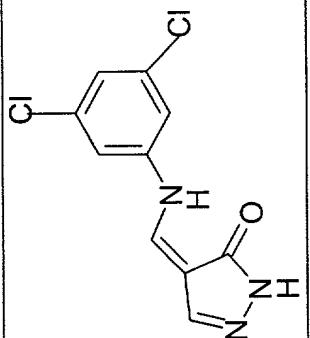
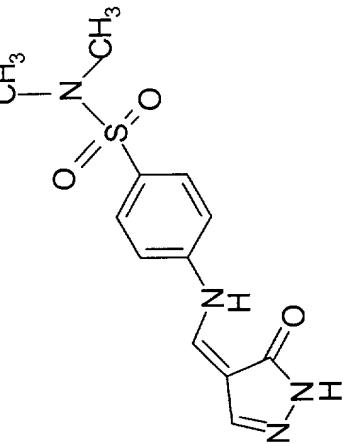
Miniscreen data in parenthesis is the extent of uracil reversal at 50 μ M tested compound.

Table 4
Percent Inhibition

Compound	structure	% inhibition GH activity on SEERVI	% inhibition @50 μ M Miniscreen activity	uracil re- versal
A		70	70	YES
K		60	80	YES
L		60	80	YES

Compound	structure	% inhibition GH activity on SETVI	% inhibition @50 μ M Miniscreen activity	uracil re- versal
M		50	70	YES
N		60	80	YES
O		10	70	YES

Compound	structure	% inhibition GH activity on SETVI	% inhibition @50 μ M Miniscreen activity	uracil re- versal
P		30	80	YES
Q		40	80	YES
R		40	70	YES

Compound	structure	% inhibition GH activity on SERVI	% inhibition @50 μ M Miniscreen activity	uracil re- versal
S		50	80	YES
T		20	70	YES

Compound	structure	% inhibition GH activity on SETVI	% inhibition @50 μ M Miniscreen activity	uracil re- versal
U		0	80	YES
V		50	60	YES
W		40	60	YES

Compound	structure	% inhibition GH activity on SETVI	% inhibition @50 μ M Miniscreen activity	% uracil re- versal
X		70	50	YES
Y		50	70	YES
Z		0	30	YES